OSWER Directive 9938.02b
October 1993

REVISED RCRA INSPECTION MANUAL

(November 1998 Revision)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Office of Waste Programs Enforcement
RCRA Enforcement Division

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Foreword

The RCRA Inspection Manual was originally developed and issued by the RCRA Enforcement Division of U.S. EPA's Office of Waste Programs Enforcement in 1988. The Manual was intended for the exclusive use of inspection personnel in conducting field inspections of RCRA-regulated facilities under U.S. EPA or State program authorities. Since 1988, significant regulatory developments have occurred and the need to provide a more useful tool for inspectors has grown.

The overall goal of this Manual, then, is to provide useful procedural and technical information to determine facility compliance with RCRA standards. Specific objectives are as follows:

- To provide a detailed overview of the elements of RCRA Compliance Evaluation Inspections (CEIs)
- To describe the scope of inspector authorities and responsibilities
- To provide detailed standard procedures for performing RCRA inspections
- To provide general inspection information that is comprehensive in scope and complements more detailed guidance on inspecting particular types of hazardous waste facilities
- To provide a basis for general training of new inspection personnel in RCRA inspection procedures
- To make essential regulatory information readily accessible to inspectors.

1.0 Introduction

The **primary purpose** of this Manual is to provide procedural and technical guidance for performing inspections of facilities regulated by the Resource Conservation and Recovery Act of 1976 (RCRA). The main text consists of five sections and discusses pre-inspection, inspection, and post-inspection procedures. The remainder of the Manual contains appendices that provide technical information of potential use to inspectors.

The procedures covered in the main text relate to performance of Compliance Evaluation Inspections (CEIs) of hazardous waste generators; transporters; and treatment, storage, and disposal facilities (TSDFs). However, these procedures may also be applicable to other types of RCRA inspections (which are discussed in Section 1.2); they are general and are not intended to be prescriptive, in deference to Regional and state differences in approaches and procedures. Inspectors using this Manual should be aware of and follow additional Regional or state guidance supplementing the information provided herein.

The RCRA Program

RCRA is the primary statute governing the regulation of solid and hazardous waste. It completely replaced the Solid Waste Disposal Act of 1965 and supplemented the Resource Recovery Act of 1970; RCRA itself was substantially amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA).

The *principal objectives of RCRA*, as amended, are to:

- **Promote the protection of human health and the environment from potential adverse effects of improper solid and hazardous waste management**
- **Conserve material and energy resources through waste recycling and recovery**
- **Reduce or eliminate the generation of hazardous waste as expeditiously as possible.**

To achieve these objectives, RCRA authorizes EPA to regulate the generation, treatment, storage, transportation, and disposal of hazardous wastes.[1] The structure of the national hazardous waste regulatory program envisioned by Congress is laid out in Subtitle C of RCRA (Sections 3001 through 3019), which authorizes EPA to:

- Promulgate standards governing hazardous waste generation and management
- Promulgate standards for permitting hazardous waste treatment, storage, and disposal facilities
- Inspect hazardous waste management facilities

[1] RCRA also provides EPA with authority to regulate solid waste and underground storage tanks. Programs established under these authorities are not within the scope of this Manual.

In practical terms, these requirements mean that, to be authorized, state hazardous waste regulations must be at least as stringent as federal Subtitle C standards; state regulations and programs must follow the same general approach as federal regulations and programs, and other state regulations and programs; state enforcement penalties must be at least equivalent to penalties provided for in RCRA; and state enforcement activities must be equivalent to those performed by EPA.

States have generally received authorization incrementally, consistent with the gradual implementation of the federal RCRA program (i.e., the ongoing development of regulations governing new waste management units and practices), due largely to the unavoidable lag between federal promulgation of Subtitle C standards and development and adoption of equivalent standards by the states. Thus, states may be authorized to administer and enforce the program covering certain types of waste management units and practices within the state and may not be authorized for other types of units. For example, a state may be authorized to manage the program for hazardous waste generators and storage and treatment facilities, but may not be authorized for a newer regulation based on HSWA. As a result, some facilities in a state may be subject to state enforcement, and others subject to federal enforcement through EPA Regional offices. Facilities with several types of units may be subject to joint federal/state enforcement.

> In general, where a facility is subject to joint federal/state authority, inspections may be conducted by both federal EPA and state inspectors. These inspections may be conducted jointly or separately. When acting jointly, federal and state inspectors should focus their efforts on the units subject to their respective jurisdictions. When working separately, federal or state inspectors may inspect units which are not under their jurisdiction and identify non-complying conditions. These conditions should then be reported to the agency with jurisdiction over the unit(s) for further action.

Currently, all states are authorized to administer or enforce their own programs, except for the following:

Iowa

Wyoming

Hawaii

Alaska

Following are two maps, Exhibits 1-1 and 1-2, detailing the states that are authorized for specific aspects of the RCRA program, corrective action and mixed waste. Inspectors should also be aware of the authorization status of states with respect to other aspects of the RCRA program.

Exhibit 1-2
RCRA Corrective Action Authorization as of October 1, 1993

[Note: This map is no longer accurate. Please contact your state implementing agency or EPA Regional Office for up-to-date information.]

Exhibit 1-3
Inspection Types and Relevant Guidance

Type of Inspection	Description	Guidance
Compliance Evaluation Inspection (CEI)	CEIs are routine inspections of hazardous waste generators, transporters, and TSDFs to evaluate compliance with the requirements of RCRA. CEIs encompass a file review prior to the site visit; an on-site examination of generation, treatment, storage or disposal areas; and a review of records. Inspections of facilities with delisted waste may be conducted as part of a CEI. Also, corrective action inspections are specifically intended to evaluate facilities' compliance with consent and permit orders.	• The RCRA Inspection Manual • The LDR Inspection Manual • Hazardous Waste Tank Systems Inspection Manual OSWER Dir. 9938.1A, 1988 • Hazardous Waste Incinerator Inspection Manual OSWER Dir. 9938.6, 1989 • Guidance for Inspection of Facilities with Delisted Waste , OSWER Dir. 9938.2B (to be issued) • Conducting RCRA Inspections at Mixed Waste Facilities, OSWER Dir. 9938.9, 1991
Case Development Inspection (CDI)	CDIs are conducted when RCRA violations are suspected or revealed during a CEI for the specific purpose of gathering data in support of an enforcement action.	• Technical Case Development Guidance Document OSWER Dir. 9938.3, 1988
Comprehensive Ground-Water Monitoring Evaluation (CME)	CMEs are conducted to ensure that ground-water monitoring systems are designed and function properly at RCRA land disposal facilities. In addition to the CEI activities, CMEs include sampling and analysis of the facility's ground-water monitoring system and hydrogeological conditions.	• RCRA Ground-Water Monitoring Technical Enforcement Guidance Document OSWER Dir. No. 9950.1, September 1986 • Comprehensive Ground-Water Monitoring Evaluation Guidance Document OSWER Dir. No. 9950.2, December 1986
Compliance Sampling Inspection (CSI)	CSIs are inspections in which samples are collected for laboratory analysis. A sampling inspection may be conducted in conjunction with a CEI or any other type of inspection, except a CDI.	
Operation and Maintenance Inspection (O&M)	O&M inspections of land disposal facilities are conducted to determine the adequacy of the operation and maintenance of ground-water monitoring systems at RCRA facilities after a land disposal facility has closed. O&M inspections are usually conducted at facilities that have already received a thorough evaluation of the ground-water monitoring system under a CME inspection.	• Operation and Maintenance Inspections for Ground-Water Monitoring (RCRA Ground-Water Monitoring Systems) , OSWER Dir. No. 9950.3, March 1988
Laboratory Audit	Laboratory audits are inspections of laboratories performing sample analyses. Audits ensure that these laboratories are using proper sample handling and analysis protocols.	• RCRA Laboratory Audit Inspection Guidance Document OSWER Dir. 9950.4, 1988
State Oversight Inspection	State oversight inspections are conducted by U.S. EPA personnel to determine the effectiveness of State hazardous waste management programs and to determine facility compliance.	• RCRA State Oversight Inspection Guide, OSWER Dir. No. 9946.1, December 1987

New regulations can be found in the Code of Federal Regulations. Inspection and technical guidance can be identified by contacting the RCRA Docket (703-603-9230).

Inspectors should also be ready to provide input to enforcement program managers planning initiatives that are within the inspectors' areas of expertise. In such instances, inspectors may be able to expedite information collection or identify technical difficulties or issues which should be considered in the planning stage.

Exhibit 1-4
RCRA Section 3007
(As Amended by the Solid Waste Disposal Act of 1980 and the Hazardous and Solid Waste Amendments of 1984)

INSPECTIONS

Sec. 3007. (a) **ACCESS ENTRY**.—For purposes of developing or assisting in the development of any regulation or enforcing the provisions of this title, any person who generates, stores, treats, transports, disposes of, or otherwise handles or has handled hazardous waste shall, upon request of any officer, employee or representative of the Environmental Protection Agency, duly designated by the Administrator, or upon request of any duly designated officer, employee or representative of a State having an authorized hazardous waste program, furnish information relating to such wastes and permit such person at all reasonable times to have access to, and to copy all records relating to such wastes. For the purposes of developing or assisting in the development of any regulation or enforcing the provisions of this title, such officers, employees or representatives are authorized —

(1) to enter at reasonable times any establishment or other place where hazardous wastes are or have been generated, stored, treated, disposed of, or transported from;

(2) to inspect and obtain samples from any person of any such wastes and samples of any containers or labeling for such wastes.

Each such inspection shall be commenced and completed with reasonable promptness. If the officer, employee, or representative obtains any samples, prior to leaving the premises, he shall give to the owner, operator, or agent in charge a receipt describing the sample obtained and if requested a portion of each such sample equal in volume or weight to the portion retained. If any analysis is made of such samples, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge.

(b) **AVAILABILITY TO PUBLIC**.—1) Any records, reports, or information (including records, reports, or information obtained by representatives of the Environmental Protection Agency) obtained from any person under this section shall be available to the public, except that upon a showing satisfactory to the Administrator (or the State, as the case may be) by any person that records, reports, or information, or particular part thereof, to which the Administrator (or the State, as the case may be) or any officer, employee or representative thereof has access under this section if made public, would divulge information entitled to protection under section 1905 of title 18 of the United States Code, such information or particular portion thereof shall be considered confidential in accordance with the purposes of that section, except that such record, report, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this Act, or when relevant in any proceeding under this Act.

(2) Any person not subject to the provisions of section 1905 of title 18 of the United States Code who knowingly and willfully divulges or discloses any information entitled to protection under this subsection shall, upon conviction, be subject to a fine of not more than $5,000 or to imprisonment not to exceed one year, or both.

Although compliance inspections may result in enforcement actions, they generally will not involve the need to inform individuals of their rights under the Fifth Amendment of the United States Constitution (e.g., to provide them with a "Miranda" warning). The Fifth Amendment provides that "No person shall be compelled in any criminal case to be a witness against himself." Because inspections under RCRA are generally not conducted by law enforcement officers and do not involve custodial situations (when a person is taken into custody), Fifth Amendment rights normally are not implicated.

Confidential Business Information

Inspectors who conduct RCRA inspections will probably encounter confidential business information (CBI) during the course of their work. Inasmuch as this information may only be viewed by individuals who have been cleared for access, all inspectors should have CBI access authorization. This authorization is granted by either the EPA's Deputy Administrator for General Enforcement or the duly designated state-level representative in the case of a state-run hazardous waste program.

When inspectors return from an inspection with information that a facility owner/operator has declared to be confidential, they should immediately give such information to the local Document Control Officer (DCO) or Document Control Assistant (DCA), who will assign a document control number to the confidential material. In addition, inspectors should inform the DCO or DCA of any physical samples that have been claimed as confidential. These samples will be assigned a document control number, which is given to laboratory personnel for use in completing chain-of-custody and laboratory analysis forms.

- Potential exposure routes
- Hazard assessment
- Long-term risk
- Levels of protection
- Safety equipment (use and maintenance)
- Personal protective equipment (use and maintenance)
- Decontamination and disposal of protective clothing
- Emergency treatment.

Exhibit 1-5 presents a partial listing of guidance documents that are available on health and safety issues related to hazardous waste management. Inspectors are referred to these documents for detailed information on the areas and issues identified above.

Exhibit 1-5
Health and Safety Guidance Documents

"Appendix M. Site Safety Plan Guidance: Draft." OSWER 9375.1-2A-C. U.S. Environmental Protection Agency. December 30, 1986. Provides information on health and safety to supplement Regional Office safety procedures.

"Chemical Engineering Preparedness Program, Interim Guidance," U.S. Environmental Protection Agency. Program Directive No. 9223.0-01A. OERR, Catalog of Program Directives. December 1986. Establishes criteria for identifying acutely toxic chemicals.

Chemical Manufacturers Association, 1825 Connecticut Avenue, N.W., Washington, D.C. 20009. The CMA has many publications that give complete information on health and fire hazards, handling, storage, labeling, packaging, and transportation. A list of publications is available.

"Dangerous Properties of Industrial Materials," Sax, Newton Irving, Reinhold Publishing Corporation, New York, 1989 Seventh Edition. Contains information covering more than 12,000 hazardous materials. Areas of hazard covered include radiation hazards, industrial fire protection, storage and handling of hazardous materials, respiratory protection, and personal hygiene.

"Environmental Monitoring Series: Hazardous Materials Spill Monitoring Safety Handbook and Chemical Hazard Guide Part A." EPAx8602-0151. U.S. Environmental Protection Agency. 1979. Presents information on hazards from spills of chemical compounds, exposure, prevention, protection, and first-aid measures to be followed by response personnel.

"Fire Protection Guide To Hazardous Materials," National Fire Protection Association, 60 Batterymarch Street, Boston, Massachusetts 02110. This publication is a complete volume on the fire, explosion, and health characteristics of many chemicals and materials. It contains complete texts of the following NFPA documents: 325M, 49, 491M, and 704.

"Guidance on Remedial Investigations Under CERCLA," U.S. Environmental Protection Agency, HWERL, OERR, OWPE. May 1985. Provides guidance on conducting remedial investigations at uncontrolled hazardous waste sites; includes detailed discussion of health and safety issues and procedures.

"Hazardous Waste Site Investigation Training." EPA-8512-0003. U.S. Environmental Protection Agency. 1981. Covers a 5-day training course and includes appendices on toxicology and safety and health policy.

1.6 Work Ethics

Inspectors are skilled field professionals who represent regulatory agencies when dealing with industry and the public. As a result, inspection personnel are expected to perform their duties in a professional and responsible manner.

Personnel shall:

- **Develop and report the facts of an investigation completely, accurately, and objectively**
- **Conduct themselves at all times in accordance with the regulations in the EPA handbook, Responsibilities and Conduct for EPA Employees**
- **Avoid, in the course of an investigation, any act or failure to act which could be considered motivated by reason of personal or private gain**
- **Improve continually their professional knowledge and technical skill in conducting hazardous waste inspections.**

Discussed below are several specific topics pertinent to RCRA inspectors.

Conflicts of Interest

A **conflict of interest** may exist whenever an inspector has a personal or private interest in a matter which is related to his or her official duties and responsibilities. It is important to avoid even the appearance of a conflict of interest because such an appearance damages, in the eyes of the public, the integrity of the EPA or state agency and their employees. All employees must, therefore, be constantly aware of situations which are, or give the appearance of being, conflicts of interest when dealing with others inside or outside of the government. For a detailed discussion of situations and/or activities which may result in a conflict of interest, personnel are directed to Responsibilities and Conduct for EPA Employees, which can also be found in the Federal Register (38 FR No. 73), April 17, 1973.

Public Relations

It is important that cooperation be obtained from, and good working relations established with, the public and regulated community. This can best be accomplished by using diplomacy, tact, and persuasion. Even a hostile person should be treated with courtesy and respect. Personnel should not offer opinions concerning any person, regulatory agency, manufacturer or industrial product. All information acquired in the course of duty is for official use only.

1.7 Summary

In performing their job, RCRA inspectors must keep in mind a number of considerations:

- **The purpose of the RCRA program**
- **The types of inspections that should be performed**
- **The types of enforcement actions that can be brought against violators**
- **Current EPA enforcement priorities**
- **The scope of and limit on permissible action**
- **Ways in which to protect themselves**
- **The need to comply with ethical and legal requirements.**

Although specific skills and knowledge are needed to perform effectively at specific inspection-related tasks, inspectors must internalize the above mentioned considerations to assure a solid foundation for all inspection/enforcement activity.

2.0 Preparing for an Inspection

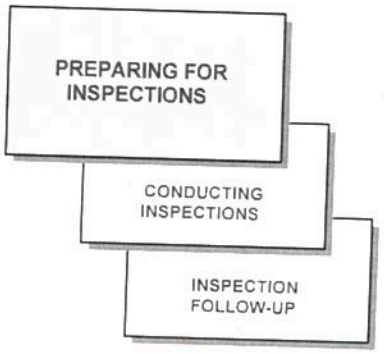
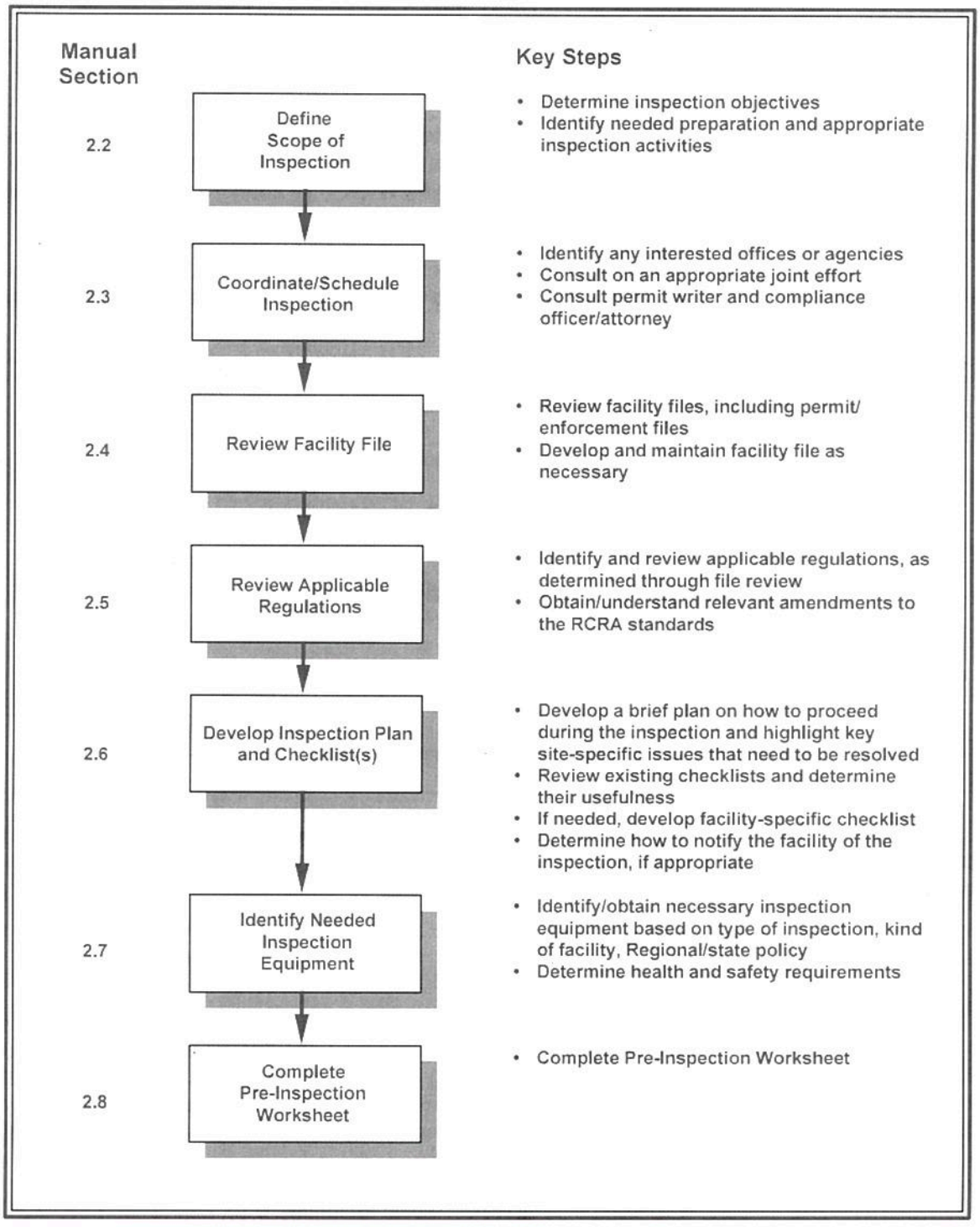


Exhibit 2-1
Inspection Preparation Summary



- The regulations and enforcement documents that should be obtained and reviewed
- Whether sampling will be required during the inspection.[2]
- Whether it is appropriate to notify the facility in advance of the inspection.

An inspector must have as clear an understanding of the scope of an inspection as possible, derived in part from communications with his or her supervisor or other enforcement personnel, as appropriate to the Region or state.

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2 Preparing for sampling during the inspection is not within the scope of this Manual: inspectors should refer to the RCRA Technical Case Development Guidance Document, OSWER Dir. 9938.3, 1988.

Federal inspectors may find state and local agencies to be good sources of information about a facility. For example, some states maintain waste manifest records or histories that are useful in preparing for an inspection. Similarly, state inspectors may find the Regional EPA office has useful information about a facility obtained prior to state authorization or for other purposes (e.g., the NPDES program).

Inspectors, or their supervisors, should confirm that all appropriate people have been contacted to prevent interference with planned, ongoing activities and to insure efficient use of inspection resources.

Permitted Facilities

Inspectors should contact the responsible permit writer before inspecting facilities that have applied for or received a permit. If the facility's permit application is undergoing review, the permit writer and the application will usually provide valuable information about the facility and, alternatively, the permit writer may have information needs that inspectors can fulfill during an inspection (e.g., verifying completion of facility modifications reported by the permit applicant). If a facility has received its permit, the permit imposes site-specific requirements that are subject to enforcement and should be evaluated during the inspection. In addition, the permit writer may be able to identify suspected problem areas at a facility. Preparing for an inspection at permitted facilities is discussed in greater detail in Chapter 3 of the Manual.

Enforcement Actions

If an inspector is conducting an inspection to support an enforcement action (e.g., to determine if a facility has come into compliance with the terms of an enforcement order), he or she must coordinate the inspection with the appropriate compliance officer or attorney assigned to the action. Those individuals will be able to explain the specifics of the action and identify important areas for review at the facility. Inspectors should advise the attorney or compliance officer of the time and date of an inspection, and obtain their phone numbers so that they can be contacted from the field if an inspector needs to confer on specific aspects of the inspection.

> NOTE: Inspectors must make any calls from the field to an attorney or compliance officer confidentially, preferably from an off-site phone, and should give no indication to the owner/operator that a conference has occurred.

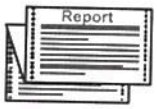
Inspectors should also determine, with guidance from the compliance officer or attorney, how to submit inspection results. Normally, inspection results are submitted in an inspector's report (discussed in Chapter 5 of this Manual); however, results can be "fast tracked" to the requesting office to expedite response actions.

Exhibit 2-2 below describes the minimum contents of an inspection file.

> NOTE: A facility's Part A application, Part B application, and/or permit will provide some of the information listed in Exhibit 2-2, including a plot plan or map and, possibly, a flow chart or illustration showing processes and design features. Part B permit applications and final permits may be lengthy documents which may not be convenient to duplicate for the inspection file if they are already maintained in the files of another office. It may be more efficient and convenient to note in the central inspection file where these documents are maintained and how they may be obtained for review by inspectors (e.g., the point-of-contact for obtaining the document, such as the permit writer). Inspection planning for permitted facilities is discussed in greater detail in Chapter 3 of this Manual.

When inspecting a manufacturing plant, inspectors may want to obtain additional information on the types of processes used at the plant to better understand plant activities once on-site. Several EPA documents and other standard references on industrial processes are available for this purpose and are listed in Appendix V of the Manual.

Reviewing Facility Enforcement Documents



Where the purpose of an inspection is to support an enforcement action (e.g., to evaluate facility progress in meeting compliance deadlines set forth in an enforcement order), inspectors should obtain all applicable documents from the enforcement office, compliance specialist, legal counsel, or other appropriate office or official. Generally, inspectors should obtain these documents while attempting to coordinate an inspection, as discussed in Section 2.3 above.

Inspectors should review enforcement documents to determine:

- Specific activities or units of interest at a facility
- Specific non-complying conditions or violations
- Specific activities a facility is required to have performed or be performing to come into compliance
- The compliance schedule and intermediate milestones towards completion of required activities.

Knowing these items is important in determining the applicable regulations that must be reviewed (Section 2.5 below), and the appropriate strategy for inspecting a facility and developing an inspection plan (Section 2.6 below).

2.5 Reviewing Applicable Regulations

Inspectors should obtain and review all federal and state regulations governing operations of a facility that is to be inspected. In most cases, inspectors will be able to determine which regulations apply to a facility, based on information in the facility file. In some cases, they will need to contact an attorney or other enforcement personnel for assistance.

It is important that inspectors use the most current versions of regulations when reviewing applicable standards. Federal RCRA standards are published in their entirety annually in Title 40 of the Code of Federal Regulations. Amendments to the federal standards promulgated periodically during the year are published in the Federal Register, which is published daily. Inspectors can obtain copies of new or recently promulgated regulations from their enforcement office or from the Regional or state legal counsel. Information on recently published amendments, and answers to questions regarding the RCRA standards, can be obtained from the RCRA-Superfund Industry Assistance Hotline at the following number:

RCRA /SUPERFUND INDUSTRY ASSISTANCE HOTLINE
1-800-424-9346

Approaches for keeping up with the changes in RCRA regulations and obtaining recent amendments to federal standards are discussed in detail in Appendix I of this Manual.

Inspectors should be aware that changes in regulations, which may have occurred following a previous inspection of a facility, may change the compliance status of that facility. Activities which may previously have been consistent with applicable standards may not meet current standards. Thus, the results of previous inspections, usually recorded on checklists, should be critically reviewed in light of any known regulatory changes.

Inspectors should understand, to the extent possible, the intent underlying and interpretation of applicable standards, so as to evaluate situations that may require refined knowledge of the standards and to answer as fully as possible facility representatives' questions regarding the regulations. If inspectors have questions concerning regulatory intent or interpretation, they can obtain answers through:

- Discussion of the regulation with other inspection personnel, a supervisor, or compliance personnel
- Discussion of the regulation with Office of Regional Counsel or Headquarters personnel

2.6 Developing Facility-Specific Inspection Plans and Checklists

Once inspectors have determined the scope of an inspection, discussed the inspection with relevant personnel, and reviewed all background information and standards relevant to the facility, they should prepare a brief plan for inspecting the facility.

Generally, an inspection plan does not need to be elaborate or formal, or conform to any particular format (unless the Region or state has specific inspection plan requirements); rather, the plan should be prepared in accordance with the preferences of the individual inspector in a way that will make it most useful to her or him. The inspection plan is usually used only by the inspector to help organize his or her thoughts on the inspection and prepare an inspection strategy.

As a general rule, in preparing inspection plans, inspectors should:

- Outline the steps they will take once on-site
- Highlight any particular questions the inspection should address.

Inspectors should consider the following issues in preparing an inspection plan:

- **Should they notify the facility prior to the inspection or will inspection objectives best be met by performing a "surprise" inspection?**
- **How should they proceed upon entry to the facility? Should they conduct an opening conference to discuss the purpose of the inspection with facility representatives immediately upon entry, or first proceed with a visual inspection of certain operations or units at the facility (before the owner/operator may have time to stop or conceal possible violations)?**
- **When should they conduct an opening conference, if at all? What topics should they discuss with facility representatives during an opening conference?**
- **What facility records should they focus on, as suggested by their facility file review and any enforcement actions being undertaken?**
- **What route through the facility, or order of inspection, should they follow? To what should they pay particular attention during the inspection of individual units (e.g., compliance with requirements of an enforcement action)?**
- **What hazardous wastes may they encounter? With what safety equipment, safety guidance and practices (e.g., OSHA), and facility-specific safety regulations (if the facility is being notified of the inspection) should they become familiar?**

Possible Methods of Facility Notification

- An annual notification letter which establishes the authority for inspections without specifying an inspection date
- A specific inspection letter sent out a month prior to an inspection as to inform the facility that an inspection will be conducted within a month
- An advance phone call to a facility to notify its staff of the inspection date, making appointments to see particular personnel.

These methods may be used alone, or in combination, as required. Inspectors should always, when notifying a facility, identify themselves and the organization or agency they represent.

Exhibit 2-3
List of Inspection Equipment

GENERAL EQUIPMENT

- Camera, film, and flash equipment
- Pocket calculator
- Tape measure
- Clipboard
- Waterproof pens, pencils, and markers
- Locking briefcase
- "Confidential Business Information" stamp (if needed)
- Stamp pad
- Envelopes pre-addressed to Document Control Officer (for CBI)
- Plain envelopes
- Polyethylene bags
- Disposable towels or rags
- Flashlight and batteries
- Pocket knife
- Pocket tape recorder
- Level
- Range finder/optical tape measure
- Compass
- Stopwatch
- Wind meter or Admiral Beaufort wind scale
- Square
- Ruler (for use as scale in photos)

SAFETY EQUIPMENT

- Safety glasses or goggles
- Face shield
- Ear plugs
- Coveralls, long-sleeved
- Hard hat
- Plastic shoe covers (disposable)
- Rubber-soled, metal-toed, non-skid shoes
- Liquid-proof gloves (disposable if possible)
- Long rubber apron
- Respirators and cartridges
- Self-contained breathing apparatus

PAPERWORK

- Proper identification
- Copy of facility's inspection file, permit, and monitoring schedule, including:
  - Maps
  - Photographs
  - History of enforcement actions
- Notebook
- Notice of inspection (if applicable)
- Chain of custody record
- Relevant checklists
- Code of Federal Regulations or applicable state code
- EPA Regional or state forms for:
  - Inspection confidentiality notice
  - Enforcement actions notice
  - Declaration of confidential business information
  - Receipts for documents and samples
- Field data sheets

SAMPLING EQUIPMENT

- Bucket auger
- Bucket
- Containers
  - Jars
  - Plastic (for metals)
  - Organic sample containers
- Bailers
- Pumps
- Conductivity meter
- Thermometer
- Dissolved oxygen meter
- Steel tape measure
- Sampling safety equipment (in addition to equip. on the Safety Equip. list above)
  - Tyvek suit
  - Booties
  - Gloves

2.8 Completing a Pre-Inspection Worksheet

A pre-inspection worksheet, set forth in Exhibit 2-4, can serve as:

- An internal check on performance of all necessary pre-inspection activities
- A planning tool to enable the inspector to perform pre-inspection activities more effectively.

Exhibit 2-4 is designed to insure that, at a minimum, inspectors have identified, assembled, and reviewed all relevant materials prior to departure for an inspection. Proper preparation for an inspection, as documented by completion of the worksheet, helps to insure that the inspection will be performed efficiently and will meet all objectives. Since Regional and state inspection needs, objectives, and procedures may vary, this worksheet is intended only as a guide and should be modified to reflect and incorporate the specific needs of each inspector. **It is strongly recommended that all inspectors use the following pre-inspection worksheet or a modified version.**

2.9 Summary

Adequate preparation for an inspection is an essential ingredient for fulfilling inspection objectives, regardless of the type of inspection being performed.

In this chapter, inspectors have been presented with information and approaches that should assist them in their preparations. These are only suggestions but inspectors are strongly advised to at least consider the material here and adopt portions of it for their own use.

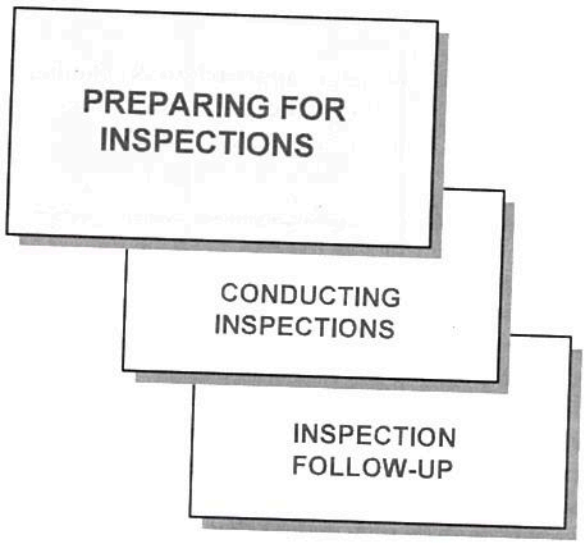
Key Steps in Preparation

- Define the inspection's scope
- Coordinate the inspection with all interested offices
- Review existing files on the facility to be inspected
- Develop an up-to-date inspection file
- Review all applicable regulations, enforcement documents, and permits
- Prepare a facility-specific inspection plan
- Identify and obtain all necessary inspection equipment
- Complete a pre-inspection worksheet.

Once inspectors have completed the above steps, they will be ready to conduct an effective inspection.

3.0 Developing Permit-Specific TSDF Inspection Plans

SECTION



- *Permit Information Summary Sheets:* **The information summary sheets model differs from the checklist model in that it provides inspectors with only the most basic facility information and a list of key points or concerns that need to be covered during the inspection (e.g., concerns about possible releases from one of the facility's units, or past compliance problems). The summary sheets may describe the number of facility units, both regulated and non-regulated, their status (operational, closing, closed) and waste generation and handling. Since the summary sheets provide only limited information, inspectors will need to become familiar with a site through some means such as review of records. One disadvantage of using an information summary sheet is that the facility inspection probably will not allow for verification of a facility's compliance with every aspect of its permit. Use of a summary sheet requires the exercise of greater judgment on the part of inspectors, and may be inappropriate for less experienced ones. Despite these shortcomings, the summary sheets still represent an attractive alternative, as inspectors can concentrate their efforts on: 1) assembling a detailed and exact list of concerns upon which an inspection will be based, and 2) applying their knowledge and experience in investigating each of the identified concerns.**

In choosing either approach, inspectors and their supervisors should consider several factors:

- The purpose of the inspection
- The complexity of the facility
- The experience of an inspector.

In any case, the selected technique should be geared towards making the goals of the inspection more attainable.

Assembling Pertinent Materials

As discussed in Chapter 2 above, inspectors must identify and make use of all information sources in developing a protocol. Perhaps the best sources of information are other agency/state officials familiar with a particular facility. They may assist in determining the major areas of interest at the facility, such as potential release points and past compliance problems. In addition, these officials should be able to assist inspectors in determining whether documents in addition to those contained in a permit may be useful in developing a complete picture of a facility.

Other information sources include:

(1) **A Facility's RCRA Permit and Permit Application** — The permit contains most of the site-specific conditions and requirements that a facility must meet to be in compliance. If conditions of the facility permit are found to be inconsistent with the regulations, the permit may serve as a shield for the facility. The content of a facility permit takes precedence over any language contained in a facility's Part A or Part B permit application.

characteristics are promulgated, additional wastes at a facility may be deemed hazardous. By knowing a facility's production processes, inspectors may be able to identify additional requirements with which the facility will need to comply.

- Ensure that appropriate safety precautions are taken
- Sharpen the focus of the compliance review.

Inspectors should review all relevant documents to develop a fact sheet on general operational characteristics of a facility. The fact sheet should contain the following:

Suggested Fact Sheet Contents

- **A description of the facility's physical boundaries**
- **The types and locations of waste management units that are covered by the permit**
- **The status of each permitted unit (e.g., under construction, under corrective action, operational, being closed, closed)**
- **Ground-water monitoring well locations**
- **A description of the processes that generate wastes**
- **A description of the types and characteristics of wastes being stored, treated, or disposed in the waste management units.**

Obtaining a **facility map** may be the most important action inspectors can take prior to a site visit. A correctly-prepared map should detail a site, inclusive of labels identifying regulated units, non-regulated units, and ground-water monitoring well locations. Exhibit 3-1 contains an example of a correctly-prepared map. The information that inspectors can obtain from a map when developing a checklist or information sheet include:

- The facility's physical boundaries
- Location and number of each type of waste management unit
- Location of ground-water monitoring wells.

Often, a permit may reflect waste management units that are proposed or still under construction, as illustrated in Exhibit 3-1. Using a map as a guide, inspectors can determine unit operational status during site visits.

The map of a facility may not distinguish permitted units from unpermitted ones. Inspectors should be able to make this distinction by using information found in the initial pages of a permit.

EXAMPLE

The container section of ABC Manufacturing's permit reads as follows:

> **Conditions Related Solely to Storage in Containers**
>
> 1. The permittee is authorized to store the following maximum quantities of hazardous waste at the specified locations:
>
> - B-10 Storage Area — 11,000 gallons
> - T-559 Storage Building — 5,280 gallons
> - B-96 Road Storage Area — 6,380 gallons.

If a map of the ABC Manufacturing facility, with corresponding location codes (e.g., B-10 Storage Area), is available, inspectors should be able to develop questions directed at verifying certain permit conditions that focus on the general site orientation. For example:

> Are any wastes being stored in containers in locations other than the three specified in the permit? ____ Yes ____ No

For purposes of developing a general site orientation, inspectors need not produce a detailed protocol that lists all of the requirements of a permit. The following are examples of the requirements that can be disregarded for these purposes:

- Cracks larger than one-inch deep and one quarter-inch wide must be repaired within 24 hours of discovery
- Four feet of aisle space is required between rows of containers.

If experienced inspectors performing an inspection would detect such a crack, measure the crack's length and depth and, after the inspection, consult the facility's permit to learn if the condition requires maintenance.

For some industries, inspectors must carefully examine the process flow diagrams due to the unit-specific nature of the waste listing.

EXAMPLE

In reviewing the information from a petroleum refinery, inspectors may notice that the facility does not report generating any K051 waste, although most refineries do generate K051. Examination of the process flow diagrams may reveal that this facility is using a coalescing plate separator instead of the more widely used American Petroleum Institute (API) separator. Although the sludges from both types of separators are similar in composition, only the API separator sludge is considered a listed waste.

In sum, preparation of the site orientation portion of an inspection plan allows inspectors to learn the basics about a facility so that when they perform the inspection, any obvious or serious violations can be noted. Inspectors should be alert for unpermitted units and transporter and generation activities at a mostly-permitted facility.

Releases

The inspection of potential release points must be considered when developing an inspection protocol. If an inspection does not have a specific enforcement focus, and only limited time is available for the inspection, detection of actual or potential releases is an obvious priority. In addition, discovery of releases or potential releases may lead to the inspection of additional requirements, via either permit modifications or orders, that may be imposed on the facility. RCRA Facility Assessments (RFAs) are an ideal reference tool for reviewing actual and potential release points.

Many RCRA permits contain specific provisions for identifying and mitigating releases to the environment. Many of these permit provisions reference potential releases associated with deterioration of management units.

- Erosion
- Dusty conditions around piles
- Any other indication that the unit is not containing the waste or is poorly managed.

Often, a determination of compliance with permit conditions cannot be made through a simple visual inspection. The following example relating to the ABC Manufacturing facility permit illustrates how inspectors may develop questions from permit conditions that are designed to address the above mentioned problem.

EXAMPLE

PERMIT CONDITIONS	INSPECTION QUESTIONS
"Pump all liquids out of the leachate collection and removal systems immediately after the Permittee determines liquids are present. "All liquids" means pumping out liquid so that only one inch remains in the collection sytem. Any leachate collection and removal system which generates more than 20 gallons of liquid in any calendar day shall immediately cease accepting wastes into the regulated unit. The Permittee must notify the Director in writing any time this criteria is exceeded. The Permittee is required to cease discharge of hazardous wastes into any surface impoundment and immediately implement emergency procedures whenever the level of liquids in the surface impoundment suddenly drops, and the drop is not known to be caused by changes in the flow into or out of the surface impoundment from normal operation."	Does the facility maintain daily records of daily leachate quantities collected? ____ Yes ____ No Do records indicate the facility has not exceeded releases of 20 gallons per day, every day? ____ Yes ____ No If not, did the Director receive notification of this event? ____ Yes ____ No Does the facility keep records of the liquid level in the surface impoundment? ____ Yes ____ No Does the facility maintain records of "normal" flows in and out of the unit? ____ Yes ____ No Do records indicate a sudden drop in liquid level? ____ Yes ____ No

Inspectors should be careful to note the units of measure (e.g., mg/l) in permit conditions and verify that a permittee is using comparable units in its analysis/reporting.

EXAMPLE

The results of the ground-water analysis mentioned in the previous example have been reported by ABC Manufacturing as follows:

Constituent	*Concentration Limit*
Creosote	Not Detected
Cresols (total of o,m, & fp-cresol)	3.5 mg/l
Naphthalene	Not Detected
Pentachlorophenol	0.02 mg/l
Phenol	2.1 mg/l
Fluoranthene	Not Detected
Chrysene	Not Detected
2,4-Dimethylphenol	Not Detected
2,3,4,6-Tetrachlorophenol	29 mg/l

At first glance, it could appear to an inspector that ABC Manufacturing's facility is in compliance with permit requirements, but a careful examination of the units of measure may reveal that 2,3,4,6-tetrachlorophenol is significantly above the permitted limit. This could happen because units specified in the permit are different from the units specified in the analytical results. The inspector may discover a lack of specified units for ground-water pollutant limitations. **Inspectors must pay close attention to this level of detail.**

Other Permit Conditions

As discussed previously, an inspection checklist can cover any or all permit conditions. This subsection provides examples of how to construct checklist questions that inspectors may find valuable through reference to permit conditions, and explains how each question may be useful to a compliance determination. While the intention of an inspection is to assist in a noncompliance determination, it is not expected that the inspection will necessarily result in such a determination without further investigation.

Exhibit 3-2
Waste Analysis Plan
Permit Conditions and Inspection Questions

PERMIT CONDITIONS	INSPECTION QUESTIONS
SAMPLING PERSONNEL The samples are taken under the direction of the Plant Environmental Chemist, who will keep a log of the sample and field notes (if any) in a bound notebook. Samples are labeled and numbered, then submitted to the laboratory with a sample request form. (The Environmental Chemist will have a Bachelor of Science Degree in Chemistry. Present Environmental Chemist is Bill Jones, III, who has a B.S. degree in chemistry from the State University, plus 7 years experience.)	1. Does the Plant Environmental Chemist have a BS or advanced degree in chemistry? ____ Yes ____ No
LABORATORY PERSONNEL All samples are submitted to ABC Manufacturing's Smalltown Plant Analytical Laboratory. All analyses are performed under the direction of the Plant Chemist whose requirements include a Bachelor of Science Degree in Chemistry. (This position is currently held by Julia Smith, who has a Bachelor of Science degree in Chemistry from State College, plus 7 years experience.)	2. Does the Plant Chemist have a BS degree in Chemistry? ____ Yes ____ No
ANALYTICAL EQUIPMENT The equipment used for the analyses performed for the Waste Analysis Plan is as follows: Atomic Absorption Spectrophotometer - Perkin Elmer Zeeman 303 Model with HGA600 Perkin Elmer Graphite Furnace. Printer - Perkin Elmer PR-100. pH Meter - Fisher Accumet Model 325 or equivalent. Balances - Various to cover weights from 0.0001 g up.	3. Does the facility have all the equipment required to run the analyses performed for the waste analysis plan: • Perkin Elmer Zeeman 3030 Model Atomic Absorption Spectrophotometer with HGA600 Perkin Elmer Graphite Furnace? ____ Yes ____ No • Perkin Elmer PR-100 printer? ____ Yes ____ No • Fisher Accumet pH meter Model 325 or equivalent? ____ Yes ____ No • Balances to cover weights from 0.0001 g and up? ____ Yes ____ No
SERVICE AND QUALITY ASSURANCE (1) Rite Weight, Inc. - To service balances every 6 months. Includes test of scale deflection, precision, and accuracy of weight set. (2) Perkin Elmer - To service AAS and Graphite furnace as necessary.	4. Are balances serviced every 6 months? ____ Yes ____ No
Note: Should ABC Manufacturing's laboratory, for any reason, not be able to analyze the samples, they will be preserved and sent to a contract laboratory (currently Jones Laboratory, Inc.). ABC Manufacturing's laboratory, or any laboratory at which samples are to be analyzed, will conform to a Quality Assurance Program as follows. For every analytical procedure, blanks, mid-point standards, calibration curves, and duplicate analyses are included. Quarterly reference standards are analyzed for all parameters in the Waste Analysis Plan and Ground-water Monitoring Plan. The Laboratory follows quality control and quality assurance procedures very similar to those given in SW 846, July, 1982, 2nd Edition, Section 10.4. In addition, the Laboratory must participate in EPA's annual Quality Assurance Program under the National Pollutant Discharge Elimination System (NPDES).	

Exhibit 3-3
Unit-Specific Permit Conditions and Inspection Questions

PERMIT CONDITIONS	INSPECTION QUESTIONS
STORAGE TANKS	
The permittee shall install an activated carbon filtration system on the vents of the 3010 tanks. A manifold system may be used to connect the vents from each of the tanks to treat vapors from all of the tanks with a single filter. The activated carbon filtration system shall be either a Calgon VentSorb or Calgon High Flow VentSorb Canister system. The Permittee shall replace the activuated carbon filtration system in accordance withh manufacturer's recommendations or when analytical results indicate that the system has become saturated or otherwise ineffective.	1. Has the facility installed either a Calgon Vensorb High Flow Ventsorb Canister System on the vents of the 3010 tanks?
The Permittee shall maintain at least 6 inches of freeboard (headspace) in the Laboratory Holding Tank at all times. This distance (6 inches) shall be measured downward from the bottom of the overflow drain pipe, which is indicated as Item 2 in Attachment __. The Permittee shall set the liquid level switch alarm system to be activated so that the specific freeboard (headspace) limit is not exceeded.	2. Does the Permittee maintain at least 6 inches of freeboard in the laboatory holding tank at all times? _____ Yes _____ No 3. Is the switch and alarm system set and activated to ensure that this limit is not exceeded? _____ Yes _____ No
SURFACE IMPOUNDMENTS	
This permit condition defines the five evaporation impoundment units at the facility and specifies that units P-12 and P-16 will be removed from service by November 8, 1992. The liner systems of units P-12 and P-16 do not meet the requirements of the minimum technology standards (Section 3004(o) of HSWA). The Permittee did not apply for a waiver of the requirement to retrofit these impoundments to meet the minmum technology standards. Consequently, these units cannot receive waste after November 8, 1992 and closure of these units must proceed on the scheduled specified in Section II.J. and Attachment 8 of this permit.	4. Are units P-12 and P-16 continuing to receive wastes? _____ Yes _____No
"The Permittee shall monitor for and record on a daily basis the presence and volume of liquids in the leachate detection, collection, and removal system sumps during the active life of the units (including the closure period), and at least weekly during the post-closure period."	5. Has the Permittee monitored and recorded on a daily basis the presence and volume of liquids in the leachate detection, collection, and removal system sumps? _____ Yes _____ No
"The Permittee shall, within 45 calendar days of detecting an increase of treater than 50 percent aboce the preceding weekly average leakage rate, submit to the Director and the Administrator a report on the leakage."	6. Has the average leakage rate for any week ever exceeded the previous week's average by more than 50 percent? _____ Yes _____ No 7. Did the Permittee submit the required report of this event to the Director within 45 calendar days? _____ Yes _____ No

Exhibit 3-4
ABC Manufacturing Facility's Corrective Action Conditions

Ground-water shall be removed [at all locations] where hazardous wastes, hazardous constituents, or breakdown products have entered the ground-water from a solid waste management unit, as required under 40 CFR §264.101.

Constituent	Concentration Limit	Basis
Creosote	Presence or absence*	Background
Cresols (total of o, m & p-cresol)	1750 µg/l	ACL
Naphthalene	MDL	Background
Pentachlorophenol	0.20 mg/l	ACL
Phenol	3.5 mg/l	ACL
Fluoranthene	0.21 mg/l	ACL
Chrysene	MDL	Background
2,4-Dimethylphenol	MDL	Background
2,3,4,6-Tetrachlorophenol	350 µg/l	ACL
P-chloro-m-cresol	MDL	Background
2,4-Dichlorophenol	105 µg/l	ACL
2,4,6-Trichlorophenol	MDL	Background
Benzo (k) fluoranthene	MDL	Background
Benzo (b) fluoranthene	MDL	Background
2,4-Dinitrophenol	70 µg/l	ACL

The Permittee must use the Behrens-Fisher Student's t-test or an equivalent statistical test approved by the Regional Administrator to determine if concentrations exceed ground-water protection standards of this permit.

The analytical method and the minimum detection limit (MDL) for each constituent must be designated in all reports of analyses.

If the Permittee identifies additional Appendix VIII constituents, he shall:

a) Re-sample the affected well(s) within thirty (30) days;
b) Notify the Regional Administrator in writing within seven (7) days if the presence of additional constituents is confirmed.
c) Within sixty (60) days submit to the Regional Administrator, a determination whether there is a statistically significant increase above the background. The Behrens-Fisher Student's t-test or an equivalent statistical test approved by the Regional Administrator shall be used to determine a statistically significant increase; and
d) If a significant statistical increase is determined, the Permittee must submit to the Regional Administrator an application for a permit modification to make any appropriate changes to the program.

Corrective Action Pumping

The well at grid coordinates (X15, Y12) shown on Figure 1 shall be installed initially to extract the plume of contamination migration from the sludge pits, as required under 40 CFR §264.100(b) and §264.101. Additional extraction wells shall be installed within 180 days of determination by the Permittee or EPA that the initial extrication well system is not extracting the entire plume. The Permittee shall comply with all other state and federal laws regarding treatment and discharge of the extracted water. The well shall be pumped at a maximum well yield until Condition II.C.1 is met.

Time Period for Implementation

Under 40 CFR §264.100(c) and §264.101, the Permittee shall commence corrective action no later than twenty-four (24) months after the effective date of the permit.

The Permittee shall submit a compliance schedule progress report to the Regional Administrator describing progress on implementation of corrective action no later than fourteen (14) days from the first anniversary of the effective date of the permit.

Corrective Action Monitoring

The Permittee shall monitor the effectiveness of corrective action on ground-water quality and ground-water flow across the entire extent of the contamination plume emanating from the sludge pits, as required under 40 CFR §264.100(d) and §264.101.

The corrective action monitoring shall commence on the effective date of the permit with quarterly monitoring in wells WC-7 and WC-14 for the hazardous constituents listed in II.C.1.

4.0 Conducting An Inspection

SECTION

4.1 Introduction

The **authority to conduct inspections** is set forth in Section 3007(a) of RCRA and is reproduced verbatim in Exhibit 1-4 of this Manual. Section 3007(a) grants authority to inspectors to enter the premises of anyone who "generates, stores, treats, transports, disposes of, or otherwise handles or has handled hazardous wastes" and to access all records pertaining to such wastes.

The responsibilities of inspectors in conducting inspections are outlined in the statutory authority. Inspectors must:

- **Enter premises at reasonable times and complete inspections as promptly as possible**
- **Issue receipts for samples collected**
- **Provide duplicate samples**
- **Furnish owners, operators, or agents copies of any sample analyses conducted.**

In this chapter, inspectors will be provided with detailed information that will assist them in performing the following steps:

- Facility entry
- Conducting an opening discussion
- Reviewing and understanding facility operations, waste handling procedures, and records
- Visual inspections
- Documentation of observations
- Conducting a closing discussion.

Consent

The owner or agent in charge of a facility at the time of an inspection must give consent to the inspector to inspect the premises.

Inspectors should note that a consent to inspect may be withdrawn at any time. However, any segment of an inspection that is completed before such withdrawal remains valid. Withdrawal of consent is equivalent to a refused entry. In such an event, inspectors must secure a warrant to complete the inspection. Refusal of entry and use of a warrant to obtain entry are discussed in the following sections.

Inspectors may observe and report on things in **plain view** (i.e., anything that a member of the public could be in a position to observe) even without consent to site entry. This includes observations made while on private property in areas not closed to the public (e.g., matters observed while the inspector presents identification).

During an inspection, an owner/operator may try to limit an inspector's access to portions of the facility. Limiting access to portions of the facility is similar to denying access to the facility. The appropriate response to being denied access is discussed in the following sections.

Denial of Access

Inspectors may be denied access for several reasons, some of which may be valid. Inspectors can reasonably be denied access if they do not have the safety equipment required by a facility (per OSHA or NIOSH requirements). In such a case, it will generally be possible to obtain access by satisfying the owner/operator's objection (e.g., by returning on another day with the required safety equipment). Inspectors do not usually need a warrant to obtain access in such cases.

Legally indefensible actions resulting in denial of access include:

- An owner/operator refusing to allow an inspector to bring in necessary equipment (e.g., camera)
- An owner/operator refusing an inspector access to documents
- An owner/operator refusing entry due to a strike and/or plant shutdown
- An owner/operator refusing entry due to an inspector's refusal to sign a waiver or other legal document restricting the owner/operator's liabilities or obligations.

Exhibit 4-1
Format for Denial-of-Access Report

DENIAL-OF-ACCESS REPORT

On _____ at _____ I was denied access into

_____ at _____
Location

by _____
Facility Representative's Name and Title

for the following reason(s):

List here:

1. _____

2. _____

_____
Signed/Inspector

_____
Signed/Facility Representative

The facility representative, _____, has refused

to sign this Denial-Of-Access Report. (_____, _____.)

Inspectors should determine the appropriate course of action for managing a threat based upon the nature of the threat and the actions of facility officials. If threatened with violence, inspectors should terminate an inspection and follow procedures presented in the section entitled "Denial of Access." In such cases, inspectors should not return to the facility unless accompanied by a U.S. Marshal or local law enforcement officer. Inspectors will probably need to obtain a warrant in these cases.

If inspectors receive threats that do not involve a threat of physical harm (e.g., a threat to call the inspector's supervisor), they will not generally need to terminate the inspection, unless the owner/operator withdraws consent or denies access in addition to making a threat. In such a case, inspectors should follow the relevant procedures discussed in previous sections. They should also be certain to note the threats in their field log.

Inspectors must avoid making any statements to facility representatives that could be construed as threatening or inflammatory.

Inspectors should establish charge of an inspection during the opening discussion with the owner/operator. However, inspectors should be sensitive to the need to avoid, as much as possible, disrupting a facility's operations.

Throughout an inspection, inspectors should consider themselves to be investigative reporters searching for information that shows non-compliance with regulations. If inspectors diligently question facility personnel and observe operations, they will be able to discern inconsistencies in what they see, hear, and have previously reviewed, leading to possible findings of violations.

Inspectors must pursue inconsistencies until they are resolved. For example, if a facility is using a commercial solvent that generates a listed waste, but does not report that it is generating that waste, inspectors should determine what happens to the solvent. Questions: "Where is the solvent used in the plant?" "Is it all consumed during use?" Inspectors must then decide if the facility representative's explanation is plausible, and whether it is consistent with the inspector's observations and knowledge. **Inspectors should pursue inconsistencies until they are satisfied that they either constitute a violation or do not.**

Holding an opening discussion immediately after receiving access to a facility may not be appropriate in all cases. Depending upon the objective of an inspection, inspectors may want to see particular operations or locations in a facility prior to an opening discussion. For example, in an unannounced inspection of a facility with a suspected violation, an inspector may want to go directly to the site of the suspected violation to observe the violation before the owner/operator can stop, conceal, or otherwise obscure the non-complying operation or condition.

Records To Be Maintained By Regulated Parties

1. Generators:

- 262.34 - Job titles and personnel records, agreements with local authorities, and contingency plan.
- 262.40 - Manifests, biennial reports, exception reports, and waste analyses and test results (or other bases for determining the hazardous nature of a waste and its classification).
- 268.7 - Land disposal notification and certification.

2. Transporters:

- 263.22 - Manifests, shipping papers for bulk shipments by rail or water, and manifests for foreign shipments
- 279.46 - Tracking records for shipments of used oil.

3. Treatment, Storage, and Disposal Facilities:

- General facility standards, including the following:

  265.13 - Waste analysis plan
  265.15 - Inspection schedule
  265.16 - Job titles and personnel records
  265.51,53 - Contingency plan
  265.71-77 - Manifest system (records of manifests)
  265.73 - Operating record
  265.93 - Outline of ground-water monitoring plan
  265.94 - Ground-water monitoring record
  265.112 - Closure plan
  265.118 - Post-closure plan
  268.7 - Land disposal notification and certification
  268.19(d) - Special notification for characteristic wastes.

- Facility-specific standards, including the following:

  265.193(i) - Annual assessment for tanks
  265.196(f) - Certification of major repairs
  265.197(2) - Contingent post-closure plan
  265.279 - Land treatment, requirements for operating record and closure plan
  265.309 - Landfills, requirements for operating record, contents and organizations of cells, and closure plan
  265.440(c) - Drip pad contingency plan
  265.441(a) - Drip pad evaluation
  265.441(b) - Drip pad upgrade plan
  265.443(a) - Drip pad assessment
  265.443(b) - Drip pad waste collection system cleaning
  266.42 - Used oil analysis
  266.44 - Used oil fuel analysis

Exhibit 4-2
Required Submittals to the Regional Administrator

Section 265.11	EPA identification number.
Section 265.12	Notice of date of arrival of hazardous waste from a foreign source.
Section 265.56	In cases of releases, fires, or explosions, notification by emergency coordinator that an affected area is adequately cleaned before operations are resumed.
	Written report by emergency coordinator on emergency incident, within 15 days of incident.
Section 265.72	Manifest discrepancy report within 15 days of receipt of waste.
Section 265.74	Upon closure, copy of records of waste disposal locations and quantities.
Section 265.75	Biennial report.
Section 265.93	In cases of confirmation of analyses indicating significant increase (or pH decrease), a written notice that the facility may be affecting ground-water quality within 7 days of date of such confirmation.
	Within 15 days after above notification, specific plan for a ground-water quality assessment program at the facility.
	After determination of the above ground-water quality assessment, written report containing an assessment of ground-water quality and/or indicating a reinstatement of the indicator evaluation program.
Section 265.94	Recordkeeping and reporting: ground-water monitoring information as specified.
	Annual reports of Section 265.75 contain results of ground-water quality assessment program.
Section 265.115	Certification of closure.
Section 266.103	Certifications of pre-compliance and compliance.
Section 270.110	Permit application and amendments.
Section 279.51	EPA identification number.
Section 279.57	Biennial report.
Section 279.62	EPA identification number.
Section 279.73	EPA identification number.

4.5 Visual Inspection Procedures

In general, the **visual inspection of a facility** should proceed in accordance with an inspection plan or strategy that inspectors develop during inspection planning. As previously discussed in Section 2.6 above, this plan should outline, in the level of detail considered appropriate by inspectors, the operations they intend to inspect and the tentative order in which they will conduct the inspection. Inspectors may, however, determine that it is appropriate to modify a plan based upon information obtained during the record review or other factors, such as the availability of specific personnel for interviewing or the scheduled operations of waste management units to be inspected.

Inspectors should change their planned approach, as needed, to accommodate conditions they encounter at a facility.

Step-by-step procedures for visually inspecting a facility will vary according to the type of facility and the objectives of the inspection. Specific procedures for inspecting facilities for compliance with particular RCRA standards are organized by regulation in Appendix III to this document. That appendix provides a summary of RCRA standards and describes detailed suggested inspection procedures for determining compliance with Parts 262, 263, 268, and the general facility standards of Parts 264, 265, and 266.

Generic checklists, which may serve to guide inspectors in performing inspections and in recording results of inspections, are provided in Appendix IV of the Manual. Regional offices and state agencies may have developed their own checklists that should be used in lieu of those provided in Appendix IV.

Inspectors should conduct inspections in a way that allows them to evaluate and understand the waste flow within a facility and to determine the compliance status of each segment of the facility's waste management system.

Such a progression also allows inspectors to complete a checklist and to evaluate the facility in an organized manner, helping to ensure that all aspects of hazardous waste management activities at the facility are thoroughly inspected.

Inspections may be conducted completely on foot or, at larger facilities, partially by vehicle. In any case, inspectors should note all that is happening at the facility. Although inspectors should generally follow an inspection plan to better understand waste generation and management within a facility, they should not feel compelled to adhere to their original inspection plan or route. Rather, they should feel free to diverge from their original plan to further investigate any observations that may uncover potential violations or environmental hazards.

As stated earlier, inspectors should maintain control of the pace and direction of an inspection. They should ask relevant questions of both the facility representative guiding them through the facility and of other personnel. By questioning diverse personnel, inspectors may identify inconsistencies in explanations of procedures or operations that could indicate possible non-compliance that they should further investigate, and get an indication of the adequacy of the personnel training program. Inspectors should record answers to questions and observations in a field log or notebook, which is discussed in Section 4.6.

Inspectors should be careful to **remain oriented** during the tour of a facility so that they can accurately note locations of waste management areas, possible release points, potential sampling locations, etc. At larger facilities, inspectors should carry a map or plot plan in order to note locations and maintain their orientation.

Use of Inspection Checklists

As previously discussed, inspectors should complete as much of applicable checklist(s) as possible in the facility office, generally during the record review, prior to visually inspecting the facility (unless the objectives of the inspection or other circumstances dictate that the visual inspection occur before the record review). Inspectors should leave blank those sections of checklist(s) that require visual inspection to complete.

During the visual inspection, inspectors should complete those sections of checklist(s) requiring visual inspection. However, completing these sections is not the sole purpose of a visual inspection, and the inspector must not limit the visual inspection to only completing the checklist. Inspectors should be aware of, and investigate, all relevant waste generation and management activities throughout the facility, and note what is happening around them as they tour the facility. If inspectors conduct visual inspections in ways which allow them to understand how wastes are generated, transported, and managed at the facility (as previously discussed), they should be able to complete the applicable checklists easily during the inspection and obtain other important information.

To facilitate any future sampling, inspectors may identify the media or wastes to be sampled, the physical locations at which sampling should occur (e.g., the location of a possible release), the steps within a treatment process to sample, the physical characteristics of the medium to be sampled (e.g., sludge, granular solid), and other relevant information.

Observations for Follow-Up Case Development

Observations of potentially non-complying conditions or criminal activity made by inspectors during CEIs may result in the initiation of enforcement actions.

In all cases, inspectors should accurately and validly document all observations that may lead to or support further case development activities. They should record in their notebooks any and all observations made during an inspection and, where appropriate, use other forms of documentation (e.g., photographs) to further record potentially non-complying conditions. Documentation is discussed further in Section 4.6 following.

Checklists

In general, inspectors should use **checklists** in conjunction with field notebooks to record inspection observations. However, Regions or states may have different policies on the use of checklists, and inspectors should follow their applicable Regional or state policy. Also, some inspectors may not be comfortable with checklists and should find a mechanism for recording information consistent with his/her style.

Appendix IV of this document provides checklists for use by inspectors. In some cases, Regions or states may have preferred checklists that should be used instead of the checklists provided here. Inspectors should use the checklists preferred by their Region or state. **Inspectors should not rely on checklists as a substitute for knowledge and understanding of the regulations.**

As discussed in Section 4.5, inspectors should remember that checklists are only a tool for organizing, conducting, and recording the results of an inspection; they should not limit the scope of an inspection in any way since completion of a checklist is not a valid goal. Inspectors should be observant of the general operation of a facility, waste management practices, and potentially regulated activities not covered by checklists (e.g., new activities of which they were not aware in planning the inspection) as they perform the record review and visual inspection.

Inspectors should generally limit the scope of comments on a checklist to checking the relevant answers, although more extensive comments may be made if no alternative record is available for noting observations. It is recommended that comments or observations on checklist answers be recorded in the field notebook, where there is adequate room for explanations, sketches, etc., to expand upon checklist answers.

Photographs

Photographs provide the most accurate documentation of inspectors' observations, and inspectors can use this significant and informative source for review prior to future inspections, at informal meetings, and at hearings. **Documentation of a photograph's origin is crucial to its validity as a representation of an existing situation**. Inspectors should note, in a field notebook or on a facility map, the following information about each photograph they take:

- Date
- Time
- Number of the photo on the roll
- Type of film, lens, and camera used
- Signature of photographer
- Name and ID number of site
- General direction faced by inspector when taking photograph
- Location of checkpoint on site
- Other comments (e.g., weather conditions).

Inspectors should limit their comments to these pertinent facts because any discussion of the photograph in terms of its content could jeopardize its value as evidence.

4.7 Closing Discussion

Facility officials are usually anxious to discuss the findings of an inspection before inspectors leave. Inspectors should hold a **closing meeting or conference** for the presentation and discussion of preliminary inspection findings. During this meeting or conference, inspectors can answer final questions, prepare necessary receipts, provide information about RCRA, and request the compilation of data that were not available at the time of the inspection. Inspectors should also be prepared to discuss general follow-up procedures, such as how results of the inspection will be used and what further communications the Region or state may have with the facility. Inspectors should conduct closing conferences in accordance with any applicable guidelines established by the EPA Regional Administrator or state director.

APPROACH TO CLOSING DISCUSSION

When conducting a closing discussion, inspectors should:

- Review inspection notes and checklists in private prior to the closing discussion. Inspectors may need to take time to refer back to applicable federal or state standards, call their supervisor, talk with Regional or Headquarters counsel, or call the RCRA Superfund Industry Assistance Hotline (1-800-424-9346 or, in the Washington, D.C. area, 703-412-9810), to obtain a clear interpretation of the regulations as they apply to the specific conditions at the facility. In general, at this point, inspectors should:

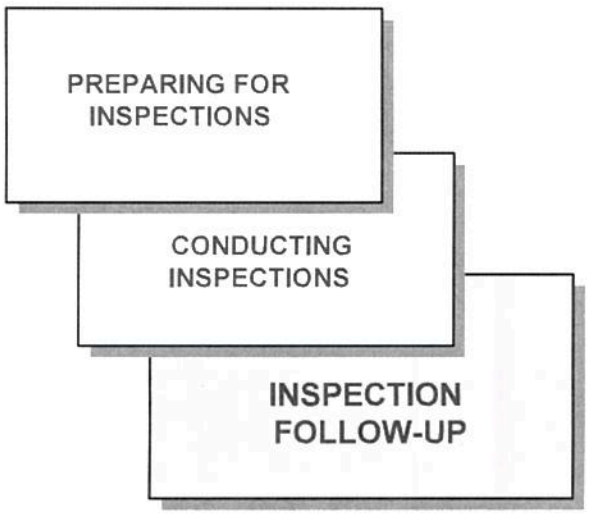
  1) Identify any questions that remain to be asked of facility officials. These may include questions raised during the visual inspection that need clarification and questions concerning potential violations uncovered during the inspection of which the facility representative is unaware.

  2) Determine which inspection results to discuss with the facility representatives and how to approach the discussion, i.e., how definitively to present results. **Of course, all inspection findings are preliminary until reviewed by an inspector's supervisor.** However, inspectors should be prepared to discuss all obvious violations of rules observed during the inspection forthrightly; they should not suggest that an owner/operator of a facility is in criminal violation of RCRA or that civil or criminal action will be taken. Inspectors may not want to discuss tentative findings when there is doubt that a violation has occurred and where they will need to further review facility conditions, regulations, and guidance to determine compliance.

Contact with a facility after an inspection can lead to gathering of additional information and demonstrate interest in the facility, but inspectors should exercise discretion in making such contacts. Contacts should serve enforcement or compliance objectives. It is important for inspectors, as industry relations representatives, to follow-up on deferred questions, referrals, and offers of help made during an inspection. These activities, within appropriate limits (which may be set by Regional or state policy), contribute towards achievement of a major enforcement objective: making regulated facilities come into, or maintain, compliance. Communicating through letter, phone call, or repeat visit indicates to facility officials that the regulatory agency is genuinely interested in assisting them achieve compliance (within appropriate limits), and that the agency is paying attention to their efforts, or inaction, in achieving or maintaining compliance.

> Inspectors should never recommend a particular consultant or consulting firm to a facility, even if asked to do so. However, inspectors may recommend that a facility contact a professional society to obtain professional assistance.

5.0 Inspection Follow-Up



5.2 Report Preparation

The **report package** that inspectors prepare following an inspection greatly impacts on the adequacy of follow-up to correct problems or deficiencies noted during an inspection. Inspectors must organize their reports in a manner that allows them and their supervisors to make maximum use of all information. It is also essential that inspectors complete their reports expeditiously so that results are available to support further enforcement actions, especially in situations where a facility has significant violations or where other offices plan activities related to an inspected facility. Specifically, inspection reports will support the following types of enforcement actions:

- Administrative actions (warning letters, administrative orders, etc.)
- Civil court actions
- Criminal court actions.

This Manual presents a general method for reporting inspection findings and conclusions. A recommended report format is included. Many Regions and states have preferred formats tailored to their own specific procedures and requirements, but in cases where inspectors may not have a specific model to follow, they will need to develop their own approach that meets all of the requirements outlined below.

Inspection reports must be well-written and should document all key facts because they may become the focal point for an enforcement action.

Objective

An inspection report should organize and coordinate all relevant information and evidence gathered during an inspection in a comprehensive and usable manner. To meet this objective, the information presented in an inspection report must be:

- **Accurate** — All information must be factual and based on sound inspection practices; observations should be the verifiable results of first-hand knowledge and must be objective and factual.
- **Relevant** — Information in an inspection report should be pertinent to the subject of the report; irrelevant data clutter a report and can reduce its clarity and usefulness.
- **Comprehensive** — The subject of a report (e.g., suspected violations) should be substantiated by as much factual, relevant information as possible. The more comprehensive the evidence is, the better and easier the case development process becomes.

5.3 Report Elements

Although the specific information about a facility that must be included in an inspection report will vary, **each report will usually be composed of three elements: narrative information, checklists, and documentary support.** Suspected violations must be documented through employment of these elements, each of which is described below.

Narrative Information

A **narrative discussion** of the facility inspected, its operations, and the findings of the inspection is a key element of an inspection report. The narrative should, at a minimum:

- Explain the overall nature of a facility's activities
- Discuss manufacturing and waste management operations at the facility
- Describe the generation and handling of wastes
- Describe apparent violations, and discuss the documentary evidence supporting a determination that a facility has a violation.

The narrative explains and supports findings presented in any inspection checklists included in the inspection report (discussed below). The narrative also may include recommendations for follow-up actions. A recommended outline for a narrative discussion is presented in Exhibit 5-1.

Inspectors should present narrative information in a simple manner.

Tips for Effective Narrative Discussion
• Use a simple writing style; avoid stilted language
• Use active rather than passive voice (e.g., "I observed ..." rather than "It was observed ...")
• Keep paragraphs brief and direct
• Avoid repetition
• Proofread the narrative carefully upon completion.

Exhibit 5-1
Recommended Narrative Outline for Inspection Report

GENERAL INFORMATION	
Facility Information	(Name, Address, Telephone Number)
Facility Representative	(Name, Title)
Inspection Participants	(Name, Agency or Company)
Date of Inspection	
Applicable Regulations	40 CFR Parts 260-272
Purpose of Inspection	(Requested by ...; inspection of ...; sampling of ...; etc.)
State Coordination	(Assisted by ...; Copy of report to ...; Additional information obtained from ...)
Facility Description	(RCRA related activities, including operations, wastes generated, waste handling operations, etc.)
Violations Observed or Alleged	(Regulatory citation; nature of violation; evidence)
FOR GENERATORS	
General Standards for Generators	Parts 262.10 - 262.12 (Describe compliance with these standards)
The Manifest	Parts 262.20 - 262.23 (Establish existence of manifest records; assess adequacy with respect to regulatory requirements)
Pre-Transport Requirements	Parts 262.30 - 262.34 (Review packaging, labeling, marking, and placarding procedures for compliance with the regulations; establish compliance with accumulation time restrictions)
Recordkeeping and Reporting	Parts 262.40 - 262.43 (Establish existence of annual reports and additional reports)
Special Conditions	Parts 262.50 - 262.51 (Inspect for reports of international shipments of waste, and proper notification to the Administrator)

5.4 Follow-Up Discussions And File Preparation

In many cases, inspectors will **brief their supervisors** on inspection results (particularly observed violations). Inspectors may also brief the Regional Case Development Officer (RCDO), equivalent state case development officer, or enforcement decision group on an inspection. These briefings may be given to:

- Assist in determining the need for possible enforcement action
- Answer questions about performance of the inspection
- Clarify inspection results to develop additional evidence in support of enforcement case development.

In addition to these briefings or discussions, inspectors may need to discuss results with other Regional or state personnel as appropriate.

Briefing Required?

- **Where inspectors have referred a facility representative to other Regional or state personnel for information or assistance.** These personnel should be contacted by the inspector and briefed about conditions at the facility and the types of questions that they should expect to receive.
- **Where a facility is subject to both federal and state enforce-ment, and inspectors observe potential violations at units not within their jurisdiction.** Inspectors should contact the Regional or state agency with enforcement authority over the unit(s) with violations. Regions and states may have policies concerning the need to consult with other agencies with which they share joint authority over hazardous waste management facilities; inspectors should become familiar with and follow policies applicable to their respective jurisdictions.
- **Where a facility has applied for a permit, or is operating under a permit, and where inspectors identify conditions that conflict with those presented in the permit application or required in the permit.** If a facility has applied for a permit, and conditions at the facility are not consistent with the application, inspectors should inform the permit writer of the conflicting conditions. If the facility has been permitted, and conditions are not consistent with the permit, the conditions may constitute violations unless a modification has been granted. In such cases, inspectors should confer with the permit writer on the observed conditions and any modifications which the facility may have applied for or discussed with the permit writer, prior to determining how to present these conditions in an inspection report.

5.5 Disclosure of Official Information

In addition to their inspection duties, **inspectors are responsible for making information available to the public.** This section describes how to handle requests for general information and the procedures for managing confidential business information.

Requests for Information

EPA's "open-door" policy on releasing information to the public strives to make information about EPA and its work freely and equally available to all interested individuals, groups, and organizations. In fact, EPA employees have both a legal and traditional responsibility for making useful educational and safety information available to the public.

This policy, however, does not extend to all information. When information related to suspicion of a violation, evidence of possible misconduct, or confidential business information is requested, personnel should immediately notify their supervisor and/or legal counsel.

Representatives of state agencies may use EPA's policies on information disclosure as a guide in the absence of formal procedures of their own.

> Inspectors should **clear any contacts with the press**, other communications media, and interested groups with their supervisor, Regional public affairs office, or state public affairs office, as appropriate. Inspectors should be familiar with and follow Regional or state policy regarding press relations.

In situations where inspectors or an inspection team are authorized to discuss activities with the press or interested groups, one person should be designated as the spokesperson to provide information concerning inspection responsibilities and investigative activities. Inspection teams should refer questions concerning investigation of alleged violations and enforcement policy to the EPA Regional Counsel or appropriate state enforcement staff attorney for response. In all contacts with the media, inspectors should be careful not to make careless or accusatory statements.

Confidential Business Information

All confidential information obtained will be identified as such and placed in a locked filing cabinet or safe. Only authorized personnel will be allowed access to the file. No copies of CBI will be made unless authorized in writing by the document control officer. Inspectors and other enforcement personnel have a responsibility to the submitters of RCRA CBI to maintain the confidentiality of such information. Personnel handling CBI are prohibited from disclosing, in any manner or to any extent not authorized by law, any RCRA CBI they have access to in the course of their employment or official duties. Requests for access to confidential information by any member of the public or by a state, local, or federal agency will be handled according to the procedure described in the Freedom of Information Act regulations (40 CFR 2). All requests will be referred to the responsible Regional organizational unit.

5.6 Summary

To ensure that all of their hard work preparing for and conducting an inspection has been worthwhile, inspectors must focus on all of the necessary follow-up work. This includes:

- Report preparation
- Follow-up discussions with appropriate personnel
- Preparation of an inspection file
- Appropriate handling of requests for information and CBI.

It is critical that reports and files be prepared in such a manner that they will be useful in future case development, inspections, and other activities.